

REMARKS

Claims 6, 8, 11, and 14 are pending in the application. Claim 6 has been amended, and claim 11 has been amended to incorporate the subject matter of claim 13, which is canceled without prejudice. The amendments are fully supported by the specification as originally filed.

As amended, claim 6 recites a ball grid array package in which a second bonding wire serves as an electrically-conductive bridge that is mounted to span in an overhead manner across an interposing electrically-conductive trace, where the second bonding wire is free of interference with first bonding wires that electrically connect a semiconductor chip to bond fingers on a substrate.

For example, as shown in FIGS. 5 and 6, one end of an electrically-conductive bridge 90, 90' is bonded to a first trace 70' to be electrically connected to the bond finger 60B where the bonding wire 50B is bonded (see, e.g., page 7, lines 1-14 of specification). Therefore, the electrically-conductive bridge 90, 90' does not interfere with the bonding wire 50B due to the provision of the first trace 70'.

As amended, claim 11 incorporates the subject matter of claim 13, and further defines that the electrically-conductive bridge is a zero-resistance chip resistor (see page 7, lines 15-18 of specification).

Claims 6 and 14 were rejected under 35 USC 103(a) as being unpatentable over "Applicant's Prior Art Figures 3 and 4 (APAF)" in view of Japanese Publication 60-157238 to "Takahama". Claim 8 was rejected under 35 USC 103(a) as being unpatentable over APAF in view of Takahama, and further in view of U.S. Patent 3,560,256 to Abrams. Claims 11 and 13 were rejected under 35 USC 103(a) as being unpatentable over APAF in view of Takahama and Abrams. These rejections are respectfully traversed.

As indicated in the Office Action of 08/09/2005, prior art FIGS. 3 and 4 do not teach or suggest the electrically-conductive bridge recited in independent claims 6 and 11.

The Takahama and Abrams references, whether taken alone or in combination with "APAF", do not teach or suggest an electrically-conductive bridge with one end electrically connected to a bond finger where a first bonding wire is bonded to electrically connect a semiconductor chip to the bond finger.

Regarding claim 6, Takahama does not teach or suggest, whether taken alone or in combination with APAF, an electrically-conductive bridge as a second bonding wire that is mounted to span an electrically-conductive trace "and is free of interference with the first bonding wires" (which are used to electrically connect a semiconductor chip to bond fingers).

Regarding claim 11, although Abrams discloses a thin-film crossover resistor 28, the Takahama and Abrams references, in combination with APAF, do not teach or suggest that the electrically-conductive bridge is a zero-resistance chip resistor.

Claim 6 also recites "a top position of the second bonding wire is lower in height than a top position of the first bonding wires."

Similarly, claim 11 recites "a top position of the chip resistor is lower in height than a top position of the bonding wires."

On pages 3, 5, and 6 of the Office Action of 08/09/2005, it was alleged that the above limitations of claims 6 and 11 were met by the Takahama reference. However, there is no reasonable basis for asserting that "the top position of the bridge of Takahama will be lower than the top position of the first bonding wires shown in APAF." The alleged support for this statement was provided on page 6 of the Office Action: "There is nothing in Takahama or Abrams that would indicate that the conductive bridges would have high profile."

However, a *prima facie* case of obviousness cannot be established merely by pointing out what the references do not teach. Moreover, the following statement on page 6 of the Office Action is mere speculation: "In fact, an air bridge would naturally have a lower profile or height due to the way it spans efficiently over the substrate and lower conductive traces."

Therefore, there is no reasonable teaching in the cited references of the limitation: "a top position of the second bonding wire is lower in height than a top position of the first bonding wires."

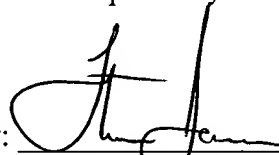
For at least the reasons described above, independent claims 6 and 11 patentably distinguish over the proposed combination of "APAF" in view of Takahama and/or Abrams.

It is believed the application is in condition for immediate allowance, which action is earnestly solicited.

Respectfully submitted,

Date: December 8, 2005

By:



Steven M. Jensen
(Reg. No. 42,693)

Edwards Angell Palmer & Dodge
P.O. Box 55874
Boston, MA 02205

Phone: (617) 439-4444

Customer No. 21874